

REMARKS

This is in full and timely response to the Office Action dated November 11, 2003. Reexamination in light of the following remarks is respectfully requested.

Claims 2, 4, 8-9, 11-22 are currently pending in this application, with claims 2 and 15 being independent.

No new matter has been added.

Allowable subject matter

It is noted that there has been no rejection of the claims made within the Office Action against claims 4, 9, 11, 12 and 13. Accordingly, claims 4, 9, 11, 12 and 13 are deemed to contain allowable subject matter. Allowance of the claims is respectfully requested.

But if the allowance of the claims is not forthcoming at the very least and new grounds of rejection made, then a new non-final Office Action is respectfully requested.

Incomplete Office Action

Please note that in every Office Action, each pending claim should be mentioned and its treatment or status given. See M.P.E.P. §707.07(i). However, claim 9 has not been mentioned within the Office Action, and its treatment or status has not been given.

On this record, it would appear that claim 9 is allowable in that the prior response handled a section 112 rejection. This may also be especially true because U.S. Patent No. 4,176,034 to Stoger et al. (Stoger) relates to aluminum, whereas claim 9 relates specifically to copper.

But if the allowance of the claims is not forthcoming at the very least and new grounds of rejection made, then a complete Office Action in the form of a *new non-final Office Action* is respectfully requested.

Rejection under 35 U.S.C. 112

Claim 2 was rejected under 35 U.S.C. 112, second paragraph.

This rejection is traversed at least for the following reasons.

The Office Action contends that claim 2 is indefinite for reciting a plating bath as part of the structure of the claimed device.

In response to this contention, claim 2 is drawn to an apparatus for electroplating and thereby forming a metal film by way of an electroplating method. Thus, an apparatus in claimed within claim 2. The apparatus of claim 2 includes the following features:

a plating chamber containing a holder for holding a substrate used in a large scale integration process and containing a plating bath;

a pre-treating chamber, in which a pre-treatment of said substrate to be plated is conducted, and

a transportation chamber connected to said pre-treating chamber by a first gate valve and connected to said plating chamber by a second gate valve,

wherein said pre-treating chamber, said transportation chamber, and said plating chamber are combined to be maintained together in a non-oxidative atmosphere.

Please note that, the claim language “is not construed in a lexicographic vacuum, but in the context of the specification and drawings.” *Toro Co. v. White Consolidated Industries Inc.*, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999). As a result, the claim language is both clear and

unambiguous. However, the attempted reconstruction made within the Office Action is merely an attempt to redefine the invention in a manner different than from what is disclosed within the specification and set forth within the claims. Such an attempted reconstruction is without authority under Title 35 U.S.C., Title 37 C.F.R., the M.P.E.P. and relevant case law; such an attempted reconstruction is therefore deemed improper and inappropriate. See M.P.E.P. §2164.08.

Withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. §103

Claim are [sic] rejected under 35 U.S.C. 103 as being allegedly obvious over U.S. Patent No. 4,176,034 to Stoger et al. (Stoger).

This rejection is respectfully traversed for at least the following reasons.

The statement of the rejection merely recites that "Claim are rejected" while failing to identify, with particularity, the claims that are the subject of this rejection. As a result of this statement of the rejection, the Office Action lacks clarity. See M.P.E.P. §707.07.

The body of the rejection makes reference to claim 8 (Office Action at page 4), contending that Stoger teaches a gas supply port 18 and a gas evacuation port 322.

In response, please note that claim 8 is dependent upon claim 2. As such, Stoger fail to disclose, teach or suggest the an apparatus having the claim 2 features of a plating chamber containing both a plating bath and a holder for holding a substrate used in a large scale integration process. Moreover, Stoger fails to disclose, teach or suggest a transportation chamber connected to the pre-treating chamber by a first gate valve and connected to the plating chamber by a second gate valve.

The body of the rejection makes reference to claim 14 (Office Action at page 4), contending that figure 2 of Stoger discloses the subject matter of claim 14.

In response, please note that claim 8 is dependent upon claim 2. As such, Stoger fail to disclose, teach or suggest the an apparatus having the claim 2 features of a plating chamber containing both a plating bath and a holder for holding a substrate used in a large scale integration process. Moreover, Stoger fails to disclose, teach or suggest a transportation chamber connected to the pre-treating chamber by a first gate valve and connected to the plating chamber by a second gate valve.

In addition, within claim 14, the transportation chamber is connected to a post-treating chamber by a third gate valve, connected to a loading side wafer container by a fourth gate valve, and connected to an unloading side wafer container by a fifth gate valve. Yet, the Office Action has failed to show within Stoger where these specific features are to be found.

Moreover, the argument in the first full paragraph on page 3 of the Action is bottomed on a perceived notion that the door 303 and the inner lock opening are “inherently” gate valves. This finding is respectfully specifically traversed, and support for the alleged inherency in the form of art, properly combined with Stoger, is solicited.

It appears from the last sentence in that paragraph that doubt is expressed in the Action, for it is contended that the selection of any equivalent transferring and/or loading/unloading valve would be within the level of ordinary skill in the art. Whether that statement is or is not fact, in the abstract, is not before us. The issue in the section 103 analysis is whether there is a motivation, impetus, or teaching to make the allegedly equivalent teaching.

Finally, the paragraph spanning pages 3 and 4 asserts that the “intended use” of the device does not cover what a device is, rather than what it does.

In response to this assertion, the features of the claims have been clearly set forth. Yet, the Office Action makes assertions of “intended use” without clearly identifying those elements within the claims that are the object of this alleged “intended use”. In this regard, the Office Action lacks clarity.

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Newly added claims

New claim 15 and the claims dependent thereon include the features of:

means for pre-treating an article to be electroplated in a pre-treating zone;

means for transporting said article from said pre-treating zone; and

means for electroplating said article by immersing said article in an electroplating bath in a non-oxidative atmosphere;

wherein said functions of pre-treating, transporting, and electroplating are carried out in said non-oxidative atmosphere.

Stoger fail to disclose, teach or suggest the an apparatus having means for pre-treating an article to be electroplated in a pre-treating zone; means for transporting said article from said pre-treating zone; and means for electroplating said article by immersing said article in an electroplating bath in a non-oxidative atmosphere; wherein said functions of pre-treating, transporting, and electroplating are carried out in said non-oxidative atmosphere.

Allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

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Respectfully submitted,

By 

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